(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau





(43) International Publication Date 27 January 2005 (27.01.2005)

PCT

(10) International Publication Number WO 2005/007713 A1

(51) International Patent Classification?: 2/10, 2/48

C08F 20/06,

(21) International Application Number:

PCT/JP2004/010544

(22) International Filing Date:

16 July 2004 (16.07.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 2003-277023

18 July 2003 (18.07.2003) J

- (71) Applicant (for all designated States except US): NIPPON SHOKUBAI CO., LTD. [JP/JP]; 1-1, Koraibashi 4-chome, Chuo-ku, Osaka-shi, Osaka, 5410043 (JP).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): NOZAKI, Shigeyuki [JP/JP]; A-301, 1-21, Shishigaya, Tsurumi-ku, Yokohama-shi, Kanagawa, 2300073 (JP). IMAI, Daisuke [JP/JP]; 4-52, Nakanoshimacho, Suita-shi, Osaka, 5640035 (JP). YAMADA, Satoshi [JP/JP]; 7-11-301, Minamitakahamacho, Suita-shi, Osaka, 5640025 (JP). TORIYA, Shuichi [JP/JP]; 9-10-307, Takashirocho, Suita-shi, Osaka, 5640024 (JP). KOZUKI, Hidekazu [JP/JP]; 337-1, Yamashita, Ibocho, Tatsuno-shi, Hyogo,

6794151 (JP). ISHIKAWA, Masaru [JP/JP]; 1-2-3, Tsujii, Himeji-shi, Hyogo, 6700083 (JP).

- (74) Agents: HATTA, Mikio et al.; Dia Palace Nibancho, 11-9, Nibancho, Chiyoda-ku, Tokyo, 1020084 (JP).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

5/007713 A

(54) Title: METHOD FOR PRODUCTION OF WATER-SOLUBLE POROUS POLYMER AND WATER-SOLUBLE POROUS POLYMER

(57) Abstract: A method for efficient production of a water-soluble porous polymer and a water-soluble porous polymer excelling in solubility in water are provided. A method for the production of the polymer is characterized by the fact that an aqueous monomer solution containing an ethylenically unsaturated monomer is polymerized while it is containing bubbles therein. The method can simplify the drying and crushing steps and the water-soluble porous polymer consequently obtained excels in solubility in water.